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Shawn Hunter

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	§	
<b>Ronald A. Bement</b>	§	
	§	Examiner: <b>Susan C. Alimenti</b>
Serial No.: <b>10/774,850</b>	§	
	§	
Filed: <b>02/09/2004</b>	§	Art Unit: <b>3644</b>
	§	
For: <b>Frost Protection for Plants</b>	§	Attorney Docket No.: <b>BEM-0001</b>

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

### REVISED APPEAL BRIEF

#### I. Real party in Interest

The real party in interest is:

Ronald A. Bement  
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#### II. Related Appeals and Interferences

There are no other appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

#### III. Status of Claims

The application as filed included claims 1-20. Claims 1-20 were later cancelled and replaced with claims 21-39.

Claims 21-25, 27-31, 33-37 and 39 are currently pending in the application and were finally rejected on April 6, 2006. Claims 26, 32 and 38 have been cancelled.

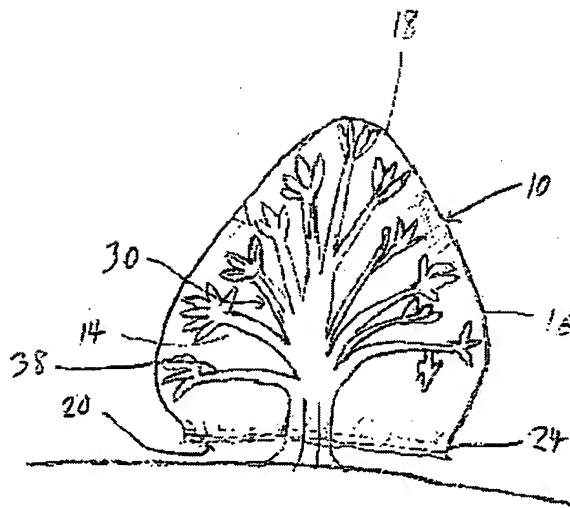
#### **IV. Status of Amendments**

In response to the Final Office Action of April 6, 2006, a Notice of Appeal was filed on July 6, 2006. No amendments were filed subsequent to the issuance of the Final Office Action.

#### **V. Summary of Claimed Subject Matter**

Applicant's invention is directed to improved method for protecting plants and groups of plants from frost, freezing and the like using frost covers that define an enclosure for an individual plant or groups of plants to protect the sides and lower portions of the plants as well as their tops from frost damage. See specification at p. 4, lines 4-7. Each cover is shaped to envelop a single plant or group of plants and is provided with a retaining mechanism, such as an elastic band or drawstring, which allows the frost cover to be secured to the plant or group of plants against wind. Specification, p. 4, lines 8-10. The frost covers are fashioned from a semi-transparent, air-permeable, and moisture permeable membrane. Specification, p. 4, lines 13-14. A currently preferred membrane is a non-woven spun-bonded mesh fabric that permits some sunlight and water to pass through the membrane while causing frost to form atop the membrane rather than on the covered plant. Specification, p. 4, lines 14-16.

Figure 2, reproduced here, illustrates an exemplary frost cover 10 placed about a single plant.



**Fig. 2**

The frost cover 10 is formed as a bag or sack to define an interior enclosure 12. Specification, p. 5, line 14. The frost cover 10 provides four side walls (two shown at 14, 16) and an upper wall 18. Specification, p. 6, lines 1-2. The frost cover 10 is fashioned from a spun-bonded mesh fabric of a type known in the art for fluid filtration. Specification, p. 5, lines 14-16. A currently preferred thickness of the mesh membrane is from approximately 6 to approximately 9 mils. Specification, p. 5, lines 20-21. The specification explains that "[t]he mesh membrane is a semi-transparent, air-permeable and moisture permeable fabric that permits light and water to pass through to a plant beneath." Specification, p. 5, lines 21-23.

**Fig. 3**

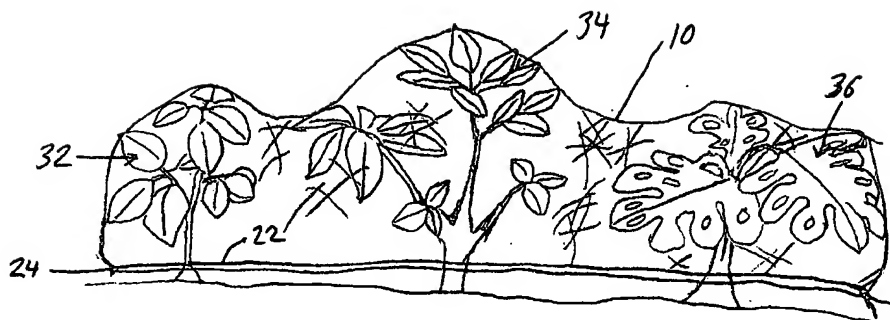


Figure 3, reproduced above, illustrates an exemplary frost cover 10 constructed in accordance with the present invention and which has been emplaced about a group of plants 32, 34, 36. Specification, p. 6, lines 12-13. Then, the frost cover 10 is secured about the plant 30 or group of plants 32, 34, 36 by tightening of the retaining mechanism 24. The retaining mechanism 24 may be an elastic band, a drawstring, or incorporate a Velcro®-style (i.e., “hook-and-loop”) fastener. Specification, p. 6, lines 6-8.

The plant cover sides 14, 16 lie horizontally adjacent the sides of the plant 30 or group of plants 32, 34, 36. Specification, p. 6, lines 14-15. The frost covers prevent frost accumulation on leaves and foliage. Specification, p. 7, lines 7-9. Also, the frost cover will permit sunlight to reach the plants and for plant respiration to occur through the cover. Specification, p. 7, lines 13-14.

The applicant's invention is intended to address the fact that many small trees, shrubs and garden plants are highly susceptible to damage from frost, even if exposed to frost and freezing conditions for a short time, and that there are no acceptable commercial products for frost protection for such plants that are compact, reusable, disposable and inexpensive. Specification, p. 2, lines 11-14. Conventionally, such plants have been

covered with “towels, sheets and other similar tarps” for frost protection. Specification, p. 2, lines 15-16. These objects do not permit light to pass through to plants.” Specification, p. 2, lines 17-18.

#### **VI. Grounds of Rejection to be Reviewed on Appeal**

Whether the Examiner has established that claims 21-25, 27-31, 33-37 and 39 are obvious under 35 U.S.C. §103 over the cited references:

1. The Examiner erroneously concludes that claims 34-37 are obvious in view of the Curtiss reference (U.S. Patent No. 1,446,416).

2. The Examiner erroneously concludes that claims 21-25 and 28-31 are obvious in view of Curtiss as applied to claims 34-37 and further in view of the Morrisoe reference (U.S. Patent No. 4,646,467).

#### **VII. Argument**

##### **1. The Examiner erroneously concludes that claims 34-37 are obvious in view of the Curtiss reference**

Claims 34-37 stand rejected as obvious in view of the Curtiss reference. The Examiner considers “Curtiss’ method of protecting a plant from frost damage [to comprise] first providing a cover 10 made of a fabric such as burlap (col. 2, ln. 2) which is resistant to frost but substantially allows air, water, and light to pass therethrough.” 04/06/06 Office action at 2. Applicant submits that the Examiner has not made a *prima facie* case for obviousness in this instance. “To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” *In re Royka*, 490 F.2d 981 (CCPA 1974); MPEP 2143.03.

a. The Curtiss Reference

Curtiss describes his covers as being preferably “formed of fabric, such as burlap or heavy muslin . . .” Curtiss at col. 2, lines 56-58. When used to protect against frost, Curtiss cover is placed into the configuration recited in claim 21 (i.e., with a top wall and four side walls and an opening), such that Curtiss’s cover has the hem 11 of the top opening 12 closed by a draw string. See Curtiss, col. 2, lines 75-85.

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*Fig. 2.*

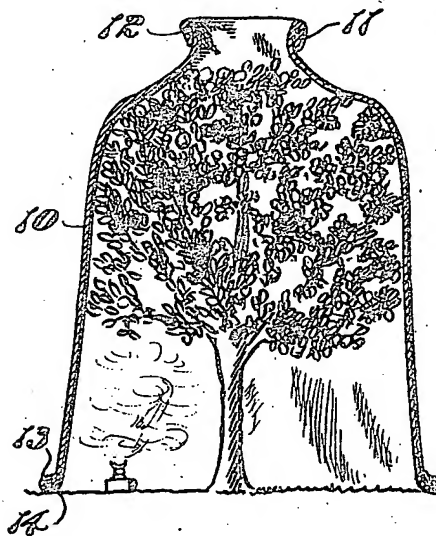
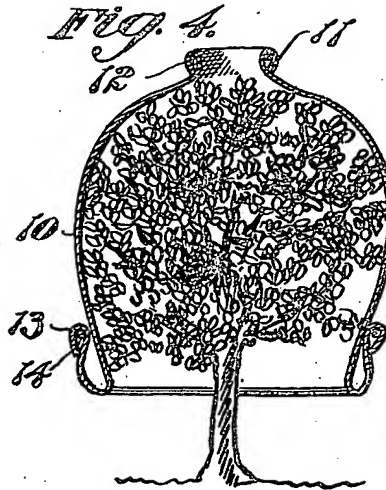


Figure 4 from Curtiss depicts a configuration of the covering with “. . . the lower portion . . . being folded upwardly to permit free circulation of air through the covering.” Curtiss, col. 1, lines 51-52. Figure 4 of Curtiss is reproduced here:



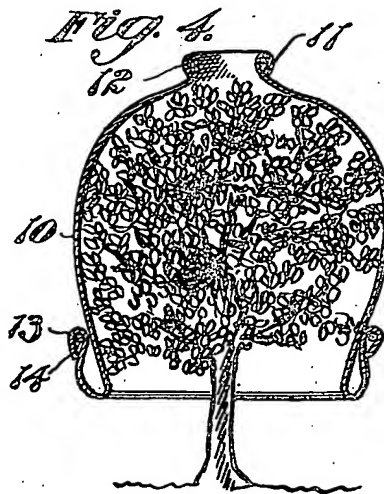
b. Curtiss's cover does not "substantially allow air, water, and light to pass through" as the claims recite

Curtiss's cover does not substantially allow air, water and light to pass through, as claimed in claims 21-25, 27-31, 33-37, and 39. Applicant argued below that a fair reading of Curtiss indicates that Curtiss's cover does not allow at least light and air to pass through the cover to any substantial degree. Based upon what is explicitly taught in Curtiss, Curtiss' cover substantially blocks passage of at least light and air through to the covered plant. Curtiss teaches the use of his protective cover "[w]here it is desired to protect the tree and the fruit thereon from sunburn . . ." Curtis, col. 2, lines 107-109. Clearly, there would be little protection from "sunburn" if the cover were to substantially allow light to pass through. Curtiss explains that his cover is useful so that ". . . the fruit on the tree is protected against the direct rays of the sun . . ." Curtiss, col. 3, lines 12-13. Curtiss teaches a cover that substantially blocks light rather than substantially allowing it to pass through. In the final office action, the Examiner wrote that:

The examiner . . . first points out that Curtiss discloses that the cover may be made of burlap, which is clearly a permeable layer to both air, water, and light (Curtiss, col. 2, ln. 2).

Final Office action of 04/06/06 at 5. Applicant simply disagrees. Nowhere does Curtiss state that burlap is a permeable layer to air, water, and light. Further, the Examiner has not pointed to any evidence outside of Curtiss to support her view that burlap is “clearly” a permeable layer. Her reasoning and conclusion are simply unsupported. As noted, it is the Examiner, not the Applicant, who must make the *prima facie* case for obviousness. On the other hand, Applicant has pointed to specific portions of Curtiss which illustrate that the described burlap covers preclude rather than allow light to pass through to the covered plant.

Air also cannot substantially pass through Curtiss’s cover, as the claims at issue recite. With respect to his Figure 4, Curtiss explains a technique for allowing air to circulate within the branches of the trees enclosed by the cover to provide adequate ventilation. Figure 4 from the Curtiss reference is reproduced below:



Curtiss writes:

... the protective covering is arranged as illustrated in Figure 4, with the lower portion of the body 10 turned or folded upwardly and secured by means of the cord 13, and with the opening at the upper end of the member in full open position so that air may circulate freely through the



space enclosed by the protective member and through the branches of the trees on which said member is positioned. It is at times desirable to prevent certain fruits, such as apricots and peaches, from ripening too quickly, and by using the protective covering on the tree as illustrated in Figure 4 the fruit on the tree is protected against the direct rays of the sun and at the same time the fruit has ample ventilation.

Curtiss, col. 2, line 108 – col. 3, line 15. Applicant submits that, if Curtiss's cover were to substantially permit air to pass through, there would be no need for the procedure that Curtiss describes to allow for ample ventilation. Thus, Curtiss's own description indicates that the cover described substantially blocks air passage rather than substantially allowing it, as claimed. Curtiss's cover is substantially the same as the sheets, towels and other tarps that have been traditionally used to cover plants and carries with it the same disadvantages.

If this rejection were reversed, Applicant submits that the remaining claims (21-27, 28-33, and 39) would be allowable at least as dependent claims.

c. There is no suggestion to modify Curtiss's cover to have four sidewalls, as the claims recite

The Examiner considers Curtiss to disclose the invention of claims 21-25, 27-31, 33-37, and 39 except that Curtiss' cover is cylindrical and lacks four defined sidewalls. She admits that Curtiss does not teach the use of four sidewalls, as claimed, but contends that it would have been obvious to one of skill in the art to change the shape or form of the cover since there is no invention in merely changing the shape or form of an article without changing its function. The Examiner points to no motivation or suggestion within the art to make the modification that would result in the claimed invention.

The Examiner's opinion that "there is no invention" in the substitution of four sidewalls for a conical surface appears to be a way of merely stating that such a

change would be an obvious variation. However, this begs the question of the where the suggestion to make the change is. Applicant submits that without such a suggestion within the art, there is no obviousness. "The mere fact that a reference can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); MPEP §2143.01. Applicant submits that there is no prima facie case for obviousness.

**2. The Examiner has Erroneously Rejected Claims 21-26 and 28-32 for Obviousness over a Combination of Curtiss and Morrisroe (U.S. Patent No. 4,646,467)**

Claims 21-26 and 28-32 stand rejected for obviousness over a combination of the Curtiss and Morrisroe references. The Examiner contends that Curtiss discloses the claims invention, except that the cover material is not a spun bonded polypropylene. She notes that Morrisroe discloses a weather protecting cover similar to Curtiss's, and teaches fabricating it from a spun-bonded polypropylene textiles. She notes that Morrisroe suggests that these textiles provide a more durable, longer-lasting product. She contends that it would have been obvious to use a spun bonded polypropylene instead of burlap in order to provide a more durable and dependable fabric.

Applicant traverses the rejection, as it might apply to the claims as amended herein. As amended, claims 21-25 and 28-31 recite methods of providing frost protection for a plant wherein the frost cover is made of a spun-bonded polypropylene material that is resistant to frost, but substantially allows air, water and light to pass through. This is not true of the covers of either Curtiss or Morrisroe and, therefore, combining these references would not result in the claimed invention. As noted previously, Curtiss's cover does not substantially allow either air or water to pass through the cover. Morrisroe's cover is

actually impervious to water (see Morrisroe's abstract) and constructed so as to prevent "light penetration." See Morrisroe, col. 5, lines 32-33. Indeed, Morrisroe notes that "[a]n inner layer of the bag is opaque and dark colored, preferably black, to keep the plant in a dark environment so as not to encourage premature growth." Morrisroe, Abstract (emphasis added).

Applicant submits that no combination of the two references would result in a frost cover having the claimed properties. One of skill in the art reading Morrisroe in conjunction with Curtiss would not be motivated to construct a cover that substantially allows air, water and light to pass through the cover. Instead, Morrisroe would, if anything, reinforce Curtiss' suggestion of making a cover that would substantially block passage of light (so as to keep the covered plant in a dark environment) and completely block passage of water.

#### **VIII. Claims Appendix**

An appendix containing a copy of the claims involved in this appeal is attached hereto.

#### **IX. Evidence Appendix**

There has been no evidence pursuant to §§1.130, 1.131, or 1.132 or other evidence submitted in this application.

**X. Related Proceedings Appendix**

There have been no decisions rendered by any court or Board in any proceeding related to this application or appeal.

Respectfully submitted,

Dated: December 4, 2006



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## **CLAIMS APPENDIX**

1-20. (Cancelled)

21. (Currently Amended) A method for providing frost protection for a plant comprising the steps of:

providing a plant cover having a top wall, four side walls, and an opening and being formed of a membrane of spun bonded polypropylene that is resistant to frost, but substantially allows air, water and light to pass through; and

disposing at least one plant through the opening of the frost cover and disposing the cover to place the top wall upon an upper portion of the at least one plant and the side walls horizontally adjacent lower portions of the at least one plant.

22. (Previously presented) The method of claim 21 further comprising the step of tightening a retaining mechanism to reduce the opening, thereby securing the frost cover upon the at least one plant.

23. (Previously presented) The method of claim 22 wherein the step of tightening a retaining mechanism comprises drawing a drawstring.

24. (Previously presented) The method of claim 22 wherein the step of tightening a retaining mechanism comprises constricting an elastic band.

25. (Previously presented) The method of claim 22 wherein the step of tightening a retaining mechanism comprises fastening a hook-and-loop style fastener.

26. (Cancelled)

27. (Previously presented) The method of claim 22 wherein a plurality of plants are disposed through the opening of the plant cover.

28. (Currently Amended) A method of providing frost protection for a plant comprising the steps of:

providing a plant cover having a top wall, four side walls, and an opening and being formed of a membrane of spun bonded polypropylene that is resistant to frost, but substantially allows air, water and light to pass through;

disposing at least one plant through the opening of the frost cover and disposing the cover to place the top wall upon an upper portion of the at least one plant and the side walls horizontally adjacent lower portions of the at least one plant; and

tightening a retaining mechanism to reduce the opening, thereby securing the frost cover upon the at least one plant.

29. (Previously presented) The method of claim 28 wherein the step of tightening a retaining mechanism comprises drawing a drawstring.

30. (Previously presented) The method of claim 28 wherein the step of tightening a retaining mechanism comprises constricting an elastic band.

31. (Previously presented) The method of claim 28 wherein the step of tightening a retaining mechanism comprises fastening a hook-and-loop style fastener.

32. (Cancelled)

33. (Previously presented) The method of claim 28 wherein a plurality of plants are disposed through the opening of the plant cover.

34. (Previously presented) A method of providing frost protection for a plant comprising the steps of:

providing a plant cover having a top wall, four side walls, and an opening and being formed of a membrane of a material that is resistant to frost, but substantially allows air, water and light to pass through;

disposing at least one plant through the opening of the frost cover and disposing the cover to place the top wall upon an upper portion of the at least one plant and the side walls horizontally adjacent lower portions of the at least one plant; and

tightening a retaining mechanism to reduce the opening, thereby securing the frost cover upon the at least one plant.

35. (Previously presented) The method of claim 34 wherein the step of tightening a retaining mechanism comprises drawing a drawstring.

36. (Previously presented) The method of claim 34 wherein the step of tightening a retaining mechanism comprises constricting an elastic band.

37. (Previously presented) The method of claim 34 wherein the step of tightening a retaining mechanism comprises fastening a hook-and-loop style fastener.

38. (Cancelled)

39. (Previously presented) The method of claim 34 wherein a plurality of plants are disposed through the opening of the plant cover.